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Trans-local ties, local ties and psychological well-being among rural-to-urban migrants in Shanghai

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ABSTRACT

During the past three decades, an estimated 200 million rural residents have moved to urban centers in China. They are “sojourners” in the cities and maintain close ties with their home communities, which we term trans-local ties. This paper examines the relationship between migrants’ social ties and their mental health, and contrasts the trans-local ties with migrants’ ties in the receiving communities, which are termed local ties. We expect that for the migrants, trans-local ties foster better mental health not only through providing emotional support but also through generating favorable social comparisons; whereas local ties may furnish important social support, but may also produce negative social comparisons. We use data collected in Shanghai to test our expectations. We compare the migrants to a sample of Shanghai natives to assess patterns of relationship between social ties and mental health that are unique to the migrants. We find that for the migrants, more numerous trans-local ties are associated with better mental health, whereas the number of local ties is not a significant predictor. This pattern is not observed among the Shanghai natives. Moreover, for migrants, trans-local ties foster a favorable evaluation of their status in Shanghai and buffer their perception of discrimination; in contrast, more numerous local ties tend to be associated with a more negative perception of social status. The findings highlight an often-overlooked pathway between social ties and health outcomes, namely, through influencing social comparison and perceived social status. This study also suggests that in addition to reducing institutional and personal discrimination, facilitating close bonds between the migrants and their home communities may be a productive way to foster their well-being, in the context of contemporary urban China.

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Introduction

During the past three decades, China has experienced probably the largest peacetime population movement in history. An estimated 200 million rural residents moved from largely poor areas in agriculture-dominated provinces into urban centers in search of better economic opportunities (Cartier, Castells, & Qiu, 2005). The low-cost labor of these rural-to-urban migrants has fueled spectacular economic growth, but China’s restrictive household registration system has discouraged the migrants from settling in the cities where they find work (Fan, 2008, pp. 40–53). It is extremely difficult for the migrants to obtain permanent legal status in cities and they are largely excluded from urban social services, such as medical insurance (Nielsen & Smyth, 2008). As a result, the majority

of rural-to-urban migrants in China typically are “sojourners”, maintaining temporary and circular patterns of movement between urban centers and their home communities (Fan, 2002b).

This paper examines the effects of social networks on mental health for rural-to-urban migrants in China. Research on the migrants’ health in China concentrates in the areas of reproductive health, infectious diseases, and occupational health risks (Hu, Cook, & Salazar, 2008). Issues relating to the migrants’ mental health are understudied. In particular, few studies have examined how the migrants’ social circumstances influence their mental health (Hu et al., 2008), despite the fact that a large and growing interdisciplinary literature has documented the detrimental health effects of the lack of social integration and low social status, above and beyond the deprivation of material resources (Ling, 2009; Wilkinson & Pickett, 2009). By investigating the link between migrants’ social ties and their mental health, this paper seeks to provide further insights into the social factors influencing the health status of a large segment of the Chinese population.

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The social networks of rural-to-urban migrants in China are influenced by their migratory experiences and their lack of opportunity to settle in cities. The migrants reconstruct their social networks in cities, which we term local ties. At the same time, they keep close emotional and economic ties with their home communities, which we term trans-local ties. The migrants typically leave behind important family members, such as spouses and children, whom they support with remittances (Qian, 2003). Increasing access to inexpensive communication technology such as mobile phones also enables the migrants to maintain contact with their trans-local ties (Cartier et al., 2005). Moreover, as the migrants travel between cities and home villages to seek to maximize their economic gains, they often return home for months at a time, before going back to cities to pursue migrant work (Fan, 2009). Their physical presence and social and economic activities in the home communities also help to sustain their social ties at home.

Trans-local ties constitute an important part of Chinese migrants' social networks, but the effects of these ties on the migrants' well-being have rarely been investigated. Past research largely emphasized migrants' local ties in the receiving community, because migrants' integration into the receiving community is seen as a primary factor for their well-being (Korinek, Entwisle, & Jampaklay, 2005; Kuo & Tsai, 1986; Vega, Kolody, & Juan Ramon, 1987). In this paper, in addition to local ties, we also emphasize trans-local ties and their effects on migrants' mental health. Moreover, we argue that comparing the impacts of trans-local and local ties on migrants' health and well-being brings into focus an often-overlooked mechanism linking social ties and health. That is, individuals' social networks may influence how they evaluate their social status by shaping their frameworks of social comparison; individuals' perceived status in turn might affect their health and well-being. For rural-to-urban migrants in China, compared with local ties, trans-local ties may be more likely to generate a favorable evaluation of their social status in general because these ties anchor migrants' social comparison in their home communities, where they typically enjoy relatively higher socioeconomic status.

In the following sections, we first develop the argument about social comparison as a possible mechanism between social ties and mental health. We then examine the case of rural-to-urban migrants in China in light of the argument, and formulate expectations about how trans-local and local ties may exert differential impacts on the migrants' mental health. We introduce the data used in this paper, which were collected in Shanghai, a major migratory destination on China's east coast, and empirically test the expectations. Implications of the findings are discussed.

Social ties, perceived social status and mental health

Existing literature on the effects of social ties on mental health has largely focused on the role of social support. Researchers studying the health benefits of social ties typically distinguish between emotional support, such as the demonstration of love, affection and sympathy, and instrumental support, such as the provision of information, material assistance and services (Thoits, 2011). Both emotional and instrumental support may foster mental health and well-being by forestalling the occurrence of stressful events or reducing the negative health effects of stress (Cohen & Wills, 1985). In addition, social ties also provide companionship, which can produce positive affect (Thoits, 2011). Social support has been shown to benefit the mental health of migrants in Western countries (Bhugra, 2004; Jasinskaja-Lahti, Liebkind, Jakkola, & Reuter, 2006; Kuo & Tsai, 1986). A few studies have examined the link between social support and mental health among migrants in China, and have generally found a positive relationship, although the effects of different types of social support seem to vary among different subgroups (Wong, He, Leung, Lau, &

Chang, 2008; Wong & Leung, 2008; Wong & Song, 2008). The mental health benefits of social support have been well documented, both in the general population and among migrant populations.

Past research, however, has remained largely reticent on another possible pathway linking social networks and health. That is, individuals' social networks may shape their social comparison processes and consequently, their perceived positions in the social hierarchy, which in turn can influence both their mental and physical health. To decide what their positions are and what their positions "should be", people compare themselves to individuals, groups and communities that they deem relevant for comparison in their social environment. It is through such comparison that people derive an understanding of their relative positions on the social ladder. One does not feel deprived only because of one's absolute standing but also because of one's relative standing in the social hierarchy (Cooley, 1902; Merton & Kitt, 1950). Individuals' social networks, as an important part of their social environment, provide the context in which individuals conceive whom they should compare with (Gartrell, 1987; 2002). Their social contacts may function as points of comparison, or serve to anchor them in a community against which they measure themselves.

Perceived social status, in turn, has been linked to individuals' health in the research accumulated during the past two decades (Marmot, 2004; Wilkinson & Pickett, 2009). People lower in the social hierarchy have worse health not only because they have less access to health-promoting goods, but also because the gap between their own circumstances and those of the others may be detrimental to health (Marmot & Wilkinson, 2001). Proponents of the relative status hypothesis argue that perceived lower social status generates substantial stress (Marmot, 2004) and contributes to a sense of lack of control over the environment, low self-esteem, fatalism and hostility (Lachman & Weaver, 1998; Marmot, Bosma, Hemingway, Brunner, & Stansfield, 1997). Stress and the deficits in psychological well-being are closely linked to myriad adverse physical and mental conditions (Fiscella & Franks, 1997; Gallo & Matthews, 2003).

In summary, social ties can influence people's mental health through at least two distinct pathways: by transmitting support and resources, and by serving to anchor social comparison. While the former has been well studied and understood, little research has been done on the second pathway.

Social ties, perceived social status and mental health among Chinese rural-to-urban migrants

Studying the relationship between social ties and mental health among rural-to-urban migrants in China, in particular comparing trans-local and local ties, provides an opportunity to examine social comparison, in addition to social support, as a pathway between social ties and mental health. The migrants are in the lower ranks in the urban social and economic hierarchy, but their socioeconomic status is higher compared to those who are left behind in the sending communities. Trans-local ties, which link migrants to their home communities, may anchor their social comparison in the home communities and generate favorable assessment of their social position in general. This may in turn lead to greater self-esteem, a heightened sense of control and an enhanced sense of purpose and meaningfulness in life, which can be consequential for the migrants' mental health. With regard to social support, trans-local ties, being far away and relatively resource-poor, may not be able to provide companionship or much instrumental support. However, as migrants increasingly make use of low-cost telecommunication tools to sustain contact with trans-local ties, these ties may also furnish emotional support.

The local ties of migrants in Chinese cities share many similarities with those in other social contexts (Korinek et al., 2005; Kuo & Tsai, 1986). The migrants tend to settle in low-cost areas with a relatively high concentration of migrants, and attempt to reconstruct their social networks based on native-place and kinship ties (Cao, 2003; Wang & Tong, 2004; Wu, 2008). Local ties may furnish companionship, and instrumental and emotional support (Wang & Tong, 2004), but they may orient the migrants' social comparison to the urban setting, in which the status of being a migrant is often highly stigmatized and looked down upon, and the migrants are faced with institutional exclusion and personal discrimination (Li, Stanton, Fang, & Lin, 2006). Moreover, high-status individuals with whom the migrants come into contact in cities, be they successful migrants who have "made it" or city dwellers, may serve as specific reference groups and generate unfavorable social comparisons.

We therefore expect that that for rural-to-urban migrants in China, trans-local ties foster better mental health through the mechanisms of providing emotional support and generating favorable social comparisons. On the other hand, local ties may furnish instrumental, emotional and companionship support, but may also result in negative social comparisons. The direction of the overall effect of local ties on the migrants' mental health is therefore unclear. Guided by these expectations, in the empirical analysis presented in this paper, we first examine how trans-local and local ties relate to migrants' mental health. We then add in indicators of social support and perceived social status, and assess whether and how social support and perceived social status serve as intervening mechanisms between trans-local and local ties and migrants' mental health.

Past studies on migration and mental health have rarely distinguished between trans-local and local ties, and have not systematically considered social comparison as a possible mechanism between social ties and health (Bhugra, 2004). The findings from a few studies, however, have implied that it is worthwhile to explore the effects of trans-local ties and social comparison as an intermediary. For example, past studies of Mexican immigrants to the U.S.A. showed that the resources brought back by the immigrants conferred higher status on them (Goldring, 1998; Massey, 1986). Moreover, a study of three immigrant groups in Finland found that the effects of trans-local ties varied across different immigrant groups (Jasinskaja-Lahti et al., 2006). The finding highlights the importance of investigating the mechanisms underlying the health impacts of trans-local ties.

A limited number of studies have examined the issues of migrants' mental health in China, but little has been done to explore the relationship between social networks and health or the possible mechanisms mediating the relationship. One study compared migrants and urban dwellers in Zhejiang and found that there was little difference in terms of the indicators of mental health. The authors speculated that this lack of vulnerability may be attributed to high levels of social capital within the migrant community, among other factors, but they did not directly test the hypothesis (Li et al., 2007). A series of papers based on a sample of migrants in Shanghai examined how migration stress, social support and the meaning of migration relate to migrants' mental health (Wong et al., 2008; Wong & Leung, 2008; Wong & Song, 2008). These studies have provided valuable insights into the state of migrants' mental health in China, and this paper seeks to further the understanding of what contributes to migrants' mental health.

In this study, we focus on the migrants but we also include a sample of Shanghai natives who live in the same neighborhoods. Comparing the migrants and Shanghai natives may allow us to ascertain the unique features of the migrants' social networks and

patterns of relationship between social ties and mental health that are unique to the migrants. Shanghai natives typically spend most of their lives in Shanghai and conduct their everyday life in Shanghai; their social contacts are primarily located in the city. For Shanghai natives, we therefore do not regard their trans-local ties as a significant anchor of social comparison. On the other hand, we expect that features of their local ties and the support transmitted through the local ties are consequential to the mental health of the Shanghai natives.

Data and methods

The data used in this study were from the 2008 Shanghai Health and Migration Study. The sample was drawn from five districts in Shanghai with high concentrations of migrants, and four street-level neighborhoods were randomly chosen from each district. In each neighborhood, 25 migrant households and 25 households of Shanghai natives were chosen and one person between the age of 16 and 64 was interviewed in each household. The study collected information on health status, the access and utilization of health care, social networks and social support, and the neighborhood environment. The migrants also answered questions on their migration experience. We excluded migrants from other urban areas from the analytical sample. We also excluded college-educated respondents with a rural origin, whose pathway to cities is drastically different from the majority of rural-to-urban migrants, who had limited education. Those college-educated individuals with a rural origin typically move to cities to attend college, unlike the majority of migrants, who move to cities to look for employment and have to take whatever job they can find. The college-educated migrants can typically find stable and formal employment upon graduation, and eventually obtain legal residence in cities. Because of their human capital, their level of socioeconomic attainment is often even higher than the native urban residents (Fan, 2002a, 2009). Our analytical sample includes 339 rural-to-urban migrants and 564 Shanghai natives. The study was approved by the Survey and Behavioral Research Ethics Committee at the Chinese University of Hong Kong.

Measures

Mental health was measured using the K6 scale of psychological well-being, which was developed to assess the distribution of nonspecific distress and screen for cases of mental illness in the general population. The K6 scale has been used in large-scale surveys such as the National Health Interview Survey in the US and all the national surveys in the World Health Organization's World Mental Health (WMH) Initiative (Kessler et al., 2003); Shanghai is one of the sites in WMH. The scale consists of six items: the respondents were asked how often they felt nervous, hopeless, anxious, depressed, worthless or that everything had been an effort during the past 30 days. The response choices are often, sometimes, rarely and never, with 1 being often and 4 being never. The scale was constructed by averaging the responses to these six items, and the internal consistency reliability is acceptable ($\alpha = 0.80$). Higher values on the scale represent better mental health.

Trans-local ties were indexed by the number of close friends or relatives the respondents had outside of Shanghai. It is worth noting that for the migrants, this measure is not equivalent to the number of close ties they have to their home communities. However, recent studies of mobile phone use among rural-to-urban migrants have shown that they mostly used their mobile phones to keep in touch with friends and relatives in the areas where they worked and those who were left behind in the home communities; mobile phone contact with people in other urban areas was

relatively infrequent (Law & Peng, 2008; Yang, 2008). These studies suggest that migrants' social contacts outside of the areas where they work tend to be those in their home communities. Moreover, in our data, the number of ties outside of Shanghai was highly correlated with how often the migrants returned to their home villages. For example, the migrants who returned home two to three times or more a year had on average 9.4 ties outside of Shanghai, compared to 7.8 for those who went back once a year, and 5.5 for the least frequent visitors to their home villages (less than once a year). Therefore, we argue that although the number of ties outside of Shanghai is not an exact measure of the number of ties to the migrants' home communities, it is a reasonable proxy. Local ties were measured by the number of close friends and relatives the respondents had in Shanghai.

To measure social support, we adapted Cohen's Interpersonal Support Evaluation List (ISEL) scale, which was designed to assess the perceived availability of support (Cohen, Memelstein, Kamarck, & Hoberman, 1985). We distinguished between three types of social support: instrumental, emotional, and companionship support. The response categories ranged between 1 and 4, with 1 being strongly disagree and 4 being strongly agree. The scales for each type of social support were calculated as the means of the items composing the scale.

We proposed to examine perceived social status as a mediator between social ties and mental health for the migrants. We used two related measures to index the migrants' perceived status and the consequence of their perceived status. The first pertained to how the migrants evaluate their status relative to Shanghai natives. The migrants were asked: Compared to Shanghai natives, would you say your status is much lower, lower, equal to or higher? Very few rural-to-urban migrants reported that their status was higher than that of the natives. So we combined the categories of equal status and higher status.

Second, a factor related to perceived status is the perception of discrimination. Evidence has shown detrimental effects of perceived discrimination on rural-to-urban migrants' mental well-being in China (Wen & Wang, 2009). Past studies in social psychology have also demonstrated that compared with high-status individuals, low-status individuals are more sensitive to discriminatory practices and more ready to attribute negative feedback to discrimination (Feldman Barrett & Swim, 1998; Major et al., 2002). It was therefore conceivable that the migrants with more positive evaluation of their status would be less likely to perceive discrimination in Shanghai and might in turn have better mental well-being. Migrant respondents were asked during the previous six months, whether they had experienced any of the following six types of discrimination, namely, being looked down upon in public, being barred from entering service venues (e.g., restaurants), being interrogated by the police in public, being paid less than locals who were doing the same job, being rejected for jobs because they did not Shanghai *hukou*, and other types of discrimination. A dichotomized variable was constructed to indicate whether the migrants had experienced any type of discrimination during the previous six months.

Control variables included demographic characteristics, such as age, gender and marital status (married vs. unmarried). We also controlled for indicators of socioeconomic status. Educational attainment was categorized into four levels: elementary school or less; junior high school; high school; and beyond high school. Personal annual income was divided into quartiles, and individuals who did not report their income were put into a separate category (about 2.6%). Job stability was assessed by a dichotomized variable indicating whether the respondent held a permanent job. The living condition was indexed by the total number of eight amenities available in the respondents' living quarters. For the migrants, we

further controlled for three factors relating to their migration experience: the number of cities the migrants had worked in before moving to Shanghai (0, 1 or ≥ 2), their plans for the future (stay in Shanghai; make some money and go home; or no clear plans), and the number of years the migrants had stayed in Shanghai. (These factors may be antecedents to social ties and mental health and therefore may confound the relationship.)

Methods

Ordinary least square (OLS) regressions were used to model the continuous mental health measure. We stratified the sample with migrant status and performed separate analyses for the migrants and Shanghai natives, because we expected that trans-local and local ties have different effects on the mental health for these two groups. We first assessed the relationships between trans-local and local ties and mental health. To investigate whether and how social support and perceived status mediated the relationships between social ties and mental health, we first examined how trans-local and local ties were related to social support and perceived status, and how social support and perceived status were associated with mental status. We then assessed changes in the relationships between trans-local and local ties and mental health after social support and perceived status are added in the analysis (Baron & Kenny, 1986).

Results

Descriptive statistics

Table 1 displays the descriptive statistics for the rural-to-urban migrants and Shanghai natives. *T*-tests and Chi-square tests were used to assess whether differences between the migrants and Shanghai natives are statistically significant. The mental health status of the migrants did not differ significantly from that of the natives, as some previous studies have demonstrated (Li et al., 2007). Not surprisingly, the migrants reported far fewer close local ties than did the Shanghai natives (4.9 vs. 8.3), but more than three times as many trans-local close ties (7.2 vs. 2.3). The migrants had access to less instrumental, emotional and companionship social support than the Shanghai natives; the differences were small but statistically significant. In terms of their perceived positions in the urban social hierarchy, 56% of the migrants regarded themselves as being equal to the Shanghai natives. About 35% reported that their status was lower than the Shanghai natives, and another 10% felt that their status was much lower. More than one third (35%) of the migrants reported that they experienced at least one form of discrimination in the six months prior to the survey.

Table 1 shows that compared to the Shanghai natives, the rural-to-urban migrants were much more disadvantaged in terms of the socioeconomic situation and living conditions. In terms of migration experience, more than half of the migrants (52%) had worked in other cities before moving to Shanghai, and on average they had spent about 7.8 years in Shanghai at the time of the survey. Twenty-three percent of the migrants reported that they wanted to make some money and then return to their home towns and 37% wanted to stay in Shanghai for a long period of time.

Trans-local ties, local ties and mental health

Table 2 examines how social ties and social support relate to the mental health status for the migrants and Shanghai natives. The results from model 2.1 suggest that for the migrants, having more close trans-local ties was associated with better mental health. Having more close local ties, on the other hand, did not seem to

Table 1
Descriptive statistics for Rural-to-urban migrants and Shanghai natives.^a

	Rural-to-urban migrants (N = 339)	Shanghai natives (N = 554)
Mental health status (mean)	3.46	3.48
<i>Social networks and social support (mean)</i>		
# Close friends/relatives in Shanghai***	4.93	8.12
# Close friends/relatives in Other places***	7.10	2.50
Instrumental social support***	3.38	3.53
Emotional social support***	2.86	3.01
Companionship**	3.14	3.29
<i>Perceived status and discrimination (%)</i>		
Status compared to Shanghai locals		
Equal	56	–
Lower	35	–
Much lower	9.7	–
Experienced discrimination in past 6 months	35	–
<i>Demographic and socioeconomic characteristics</i>		
Age (mean)***	35	42
Male (%)***	48	54
Married (%)	85	81
<i>Educational attainment (%)***</i>		
≤Primary school	15	1.7
Junior high school	66	21
High school	19	33
> High school	–	44
<i>Annual income (%)***</i>		
Lowest quartile (≤\$11,000)	37	17
2nd quartile (>\$11,000 & ≤\$17,000)	28	25
3rd quartile (>\$17,000 & ≤\$33,000)	27	35
Highest quartile (>\$33,000)	6.5	20
Unknown	2.4	2.6
Having permanent job (%)***	44	82
# Household amenities (mean)***	5.43	7.57
<i>Migration experience</i>		
# Cities worked in before Shanghai (%)		
0	41	–
1	30	–
≥2	22	–
Not sure	7.3	–
<i>Future plan (%)</i>		
Stay in Shanghai or move to another city	41	–
Make some money and go home	23	–
Not sure	27	–
Years in Shanghai (mean)	7.78	–

*p < 0.05; **p < 0.01; ***p < 0.001; two-tailed tests.

^a T-tests are used to examine the differences between migrants and Shanghai locals for continuous measured variables; Chi-square tests are used for categorical variables.

matter for the migrants. For the Shanghai natives, neither the number of close trans-local ties nor the number of close local ties was a significant predictor of their mental health (model 2.3).

For the migrants, among the socio-demographic variables, being married was associated with reporting worse mental health. This finding is the opposite of those from studies examining the relationship between marriage and health in Western contexts, which typically find that being married is beneficial to health. But it is consistent with the findings from at least one previous study using a large sample of Chinese migrants, which possibly highlights the burden and demands associated with supporting a family for migrants (Li et al., 2007). The male gender was marginally statistically significant ($p = 0.07$) with men reporting worse mental health than women. Few other demographic and socioeconomic factors were predictive of the migrants' mental status. This is also consistent with previous studies, which have typically found that demographic and socioeconomic factors had limited predictive power, but psycho-social factors, such as social support, were better predictors of migrants' mental health (Li et al., 2007; Wong & Song, 2008). Among indicators of migration experience, the migrants who planned to make some money and go home and those who

were not sure about their future plans were more likely to report worse mental health than those who planned to stay in Shanghai. In addition, compared to the migrants who had not lived in other cities before moving to Shanghai, those who were not sure about how many cities they had lived in also reported worse mental health. Similar to the migrant sample, few socio-demographic factors were significant predictors of mental health for the Shanghai natives (model 2.3).

Investigating social support and perceived status as mediating mechanisms

In models 2.2 and 2.4 in Table 2, indicators of instrumental, emotional and companion support were added. Results from model 2.2 show that both instrumental and emotional support was positively associated with the migrants' mental health, although the coefficient for instrumental support was only marginally statistically significant ($p = 0.09$). Further examination revealed a positive correlation between the number of trans-local ties and level of emotional support ($p = 0.01$). In addition, comparing the coefficients of trans-local ties in models 2.1 and 2.2 indicated that the effect of trans-local ties on mental health was slightly reduced. We therefore infer that emotional support is an intervening factor between trans-local ties and migrants' mental health. There was no significant correlation between the number of trans-local ties and level of instrumental support, which suggests that, as expected, instrumental support does not serve as an intervening factor between trans-local ties and migrants' mental health.

Results from model 2.4 suggest that Shanghai natives who reported higher levels of instrumental and emotional support also tended to report better mental health. However, neither trans-local nor local ties were significantly correlated with the level of social support that the Shanghai natives received. It is possible that other structural features of the Shanghai natives' social networks are more predictive of the functioning of the networks. These findings echo past studies, which have pointed to a distinction between the structural and the functional features of social integration and their relationships to health outcomes; the links between the structural and functional aspects of social connectedness are poorly understood (Thoits, 2011).

Table 3 presents further analyses investigating the mechanisms mediating social ties and mental health for the migrants. Model 3.1 shows how trans-local and local ties relate to mental health without the hypothesized mediating mechanisms of social support and perceived status and discrimination. Model 3.2 includes the migrants' evaluation of their social standing relative to the Shanghai natives, and shows that the migrants who felt that their status was lower or much lower than the Shanghai natives reported worse mental health than those who felt that they were equals to the Shanghai natives. Additional analysis suggests that the migrants who had more trans-local ties were more likely to perceive equal status with the Shanghai natives (those who reported equal status had on average 8.35 trans-local ties as compared to 6.18 trans-local ties for those who reported lower or much lower status; $p = 0.02$). Moreover, comparing the coefficients of trans-local ties in model 3.1 and model 3.2 reveals that adding perceived relative standing reduces the association between trans-local ties and mental health; the magnitude of the coefficient was reduced by about 20% (from 0.011 to 0.009). Taken together, these findings suggest that perceived status is a mediator of the positive relationship between trans-local ties and mental health. There was no statistically significant relationship between migrants' local ties and their mental health and therefore we do not focus on examining the mediating mechanisms here. But we observe that in

Table 2
Social networks, social support and psychological well-being for migrants and Shanghai natives.^a

	Rural-to-urban migrants		Shanghai natives	
	N = 311		N = 516	
	(2.1)	(2.2)	(2.3)	(2.4)
<i>Social networks and social support</i>				
# Close friends/relatives in Shanghai	–0.002	–0.005	–0.002	–0.001
# Close friends/relatives outside of Shanghai	0.011**	0.010*	0.002	0.002
Instrument social support	–	0.102+	–	0.201***
Emotional social support	–	0.140**	–	0.108**
Companionship	–	–0.003	–	–0.007
<i>Socio-demographic characteristics</i>				
Age	–0.007	–0.006	–0.001	0.000
Male	0.134+	0.138+	0.015	0.026
Married	–0.288*	–0.210+	–0.101	–0.047
<i>Educational attainment (Reference: ≤Primary school)</i>				
Junior high school	–0.096	–0.095	0.143	0.095
High school	–0.184	–0.164	0.115	0.054
>High school	–	–	0.100	0.013
<i>Annual personal income (Reference: Lowest quartile)</i>				
2nd quartile	0.118	0.110	0.023	0.059
3rd quartile	0.048	0.059	0.069	0.052
Highest quartile	–0.053	–0.052	0.072	0.073
Unknown	0.110	0.072	0.263+	0.201
Having permanent job	–0.066	–0.062	–0.103	–0.119
# Household amenities	–0.009	–0.013	0.020	0.006
<i>Migration experience</i>				
# Cities worked in before Shanghai (Reference: 0)				
1	–0.123	–0.133+	–	–
≥2	–0.081	–0.084	–	–
Not sure	–0.309*	–0.295*	–	–
<i>Future plan (Reference: Stay in Shanghai or move to another city)</i>				
Make some money and go home	–0.234*	–0.252**	–	–
Not sure	–0.140+	–0.158*	–	–
Years in Shanghai	–0.009	–0.007	–	–

+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; two-tailed tests.

^a Results are from ordinary least square regression models with mental health status as the dependent variable.

contrast to trans-local ties, the migrants who had more local ties tended to report lower status relative to the Shanghai natives.

Results in model 3.3 tell a similar story to those in model 3.2. Perceived discrimination was detrimental to mental health. Furthermore, the migrants who had more trans-local ties were less likely to report experiencing discrimination (those who did not report experiencing discrimination had on average 7.95 trans-local ties, compared to 5.60 trans-local ties for those who reported experiencing discrimination; $p = 0.01$). Comparing the coefficients of trans-local ties in model 3.1 and model 3.3 shows that accounting for the detrimental effects of discrimination also reduced the positive association between trans-local ties and mental health by about 20%

(from 0.011 to 0.009). It seems that having close trans-local ties was protective of perceiving discrimination and as a result led to better mental health. Model 3.4 includes both perceived relative standing and perceived discrimination; both are independent predictors of migrants' mental health. Accounting for these indicators reduced the magnitude of the coefficient of trans-local ties by about 40% (model 3.4 vs. model 3.2).

Model 3.5 includes indicators of both social support and perceived status. Results show that together these indicators account for about half of the positive associations between trans-local ties and mental health. After both social support and perceived status were included, the p value for the association

Table 3
Investigating the mechanisms of trans-local ties for rural-to-urban migrants.^a

	(3.1)	(3.2)	(3.3)	(3.4)	(3.5)
<i>Social networks and social support</i>					
# Close friends/relatives in Shanghai	–0.002	–0.001	–0.001	–0.001	–0.003
# Close friends/relatives in Other places	0.011**	0.009*	0.009*	0.007+	0.006
Instrument social support					0.066
Emotional social support					0.132**
Companionship					0.009
<i>Perceived status and discrimination</i>					
Status compared to Shanghai locals (Reference: Equal)					
Lower		–0.145*		–0.146*	–0.137*
Much Lower		–0.362**		–0.315**	–0.303**
Experienced discrimination in past 6 months			–0.283***	–0.265***	–0.235***

+ $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; two-tailed tests.

^a Results are based on the migrant sample ($N = 311$). Results are from ordinary least regressions with mental health status as the dependent variable. The regression models also control for age, gender, marital status, education, individual annual income, holding a permanent job, number of household amenities, and three indicators of migration experience: the number of cities lived in before Shanghai, future plan and the number of years spent in Shanghai.

between trans-local ties and mental health was still small ($p = 0.15$) but it was no longer statistically significant at the level of 0.05. Moreover, including both perceived relative standing and perceived discrimination reduced the coefficient of trans-local ties by about 40% (model 3.4 vs. model 3.1) but including indicators of social support only reduced the coefficient of trans-local ties by about 10% (model 2.2 vs. model 2.1). This comparison suggests that perceived relative standing and perceived discrimination are more important mediators than emotional support in our sample.

Taken together, our analyses suggest that for the rural-to-urban migrants in Shanghai, trans-local ties are more consequential to their mental health than the local ties. For migrants, a favorable evaluation of their status in Shanghai and reduced sensitivity to the discrimination experience seem to have mediated the positive relationship between their trans-local ties and mental health. We compared the rural-to-urban migrants with a sample of Shanghai natives living in the same neighborhoods, and found that the relationship between trans-local ties and mental health was unique to the migrants. For the Shanghai natives, the sizes of their trans-local and local networks were not linked to their mental health. But some of the functional features of social ties, i.e. the levels of instrumental and emotional support, were significant predictors of their mental health.

Discussion

This study investigates how the social networks of rural-to-urban migrants in China are linked to their mental health. Our findings highlight the importance of trans-local ties, i.e. migrants' ties with their home communities, the effects of which on migrants' health outcomes have rarely been systematically examined. In particular, our findings reveal the significance of an often-overlooked pathway between social ties and health outcomes, which is through influencing social comparison and perceived status. We suggest that the trans-local ties may have served to orient the social comparison of the migrants to their home communities, and as a result helped the migrants generate greater self-esteem and more positive assessment of their social positions, which in turn led to better mental health. In comparison, the more conventional pathways, such as emotional support, played a non-trivial but less important role in mediating the relationship between social connectedness and mental health in our sample. This study has implications both for the investigation of the relationship between relative status and health, and research on the migration process and health.

The findings illustrate the importance of incorporating the consideration of social networks into the study of how relative social status influences health. Existing studies in this area typically operationalize the concept of relative status as a person's ranking within a group defined by similar socio-demographic characteristics in a specific geographic area (e.g., Jaffe, Eisenbach, Neumark, & Manor, 2005; Jones & Wildman, 2008). This study points to the limitations in this approach and highlights how individuals' social networks may influence their evaluation of their positions in the social hierarchy in complicated ways. For example, the findings suggest that people's social ties can locate their reference groups far away from their immediate surroundings. Moreover there can be systematic differences among social groups in terms of their evaluation of their relative position because of different patterns of social embeddedness among social groups. Future studies investigating the relationship between relative status and health therefore need to take into consideration the embeddedness of the social comparison process.

Our study also suggests the need to systematically examine the extent to which social networks shape people's social comparison

and the mechanisms of this relationship. As Gatrell (2002) pointed out, the embeddedness of social comparison is an important but largely under-explored social process. Our study finds that among the migrants, trans-local and local ties have differential impacts on the assessments of their positions in the urban social hierarchy. Whereas more numerous trans-local ties are associated with an increased likelihood of perceiving equal status to the Shanghai natives, more numerous local ties are associated with a tendency to perceive lower status. While this pattern is consistent with our expectation, some may ask why the migrants' local ties, which are typically of low socioeconomic status like the migrants themselves, can generate negative social comparison. We argue that this can be explained by considering two mechanisms through which social networks may influence social comparison. First, social contacts may serve as concrete points of comparison. Although many of the migrants' urban social ties are low in the social hierarchy, it is still likely that migrants will come into contact with higher status individuals in their local social networks, be they urbanites or other migrants who have achieved some success in cities. Second, social ties can also serve to embed individuals in a social environment or community, against which they formulate their ideas about their relative social status. Therefore, interaction with local contacts may have oriented the migrants' social comparison to the urban setting and its standards of success. Our data do not allow us to differentiate the extent to which the two processes are involved here. This problem, and more generally how social networks influence social comparison and perceived status await future investigations.

The findings of this study have implications for the study of migration and mental health. A growing number of studies have found that first-generation racial/ethnic minority immigrants tended to enjoy better mental health than their co-ethnic counterparts born and raised in the host country. Most of these studies examined Mexican immigrants in the U.S., but the "healthy immigrant" phenomenon has been observed in other ethnic groups as well (Mossakowski, 2007). Specific causes of the health advantage of immigrants have not been entirely understood. In addition to the possibility that healthier people are more likely to migrate, existing studies have attributed the health advantage to the protective effects of the preservation of ethnic identities and cultural practices, including healthful lifestyles and close family bonds. The findings from this paper highlight another possible explanation. That is, for recent immigrants, their orientation for social comparisons may still be rooted in their home communities, which leads to a favorable perception of their social status. For their co-ethnic counterparts born and raised in the host country, as they have adapted to the host communities, their orientation of social comparisons may have shifted to the host communities, and as a result the perception of their relative social positions in the social hierarchy may have become more negative. The change in the evaluation of relative social positions may partially contribute to the "healthy immigrant" phenomenon. This connection has been implied in previous studies of immigrants (Massey, 1986; Mossakowski, 2003), but it has not been systematically and explicitly tested.

Rural-to-urban migrants in China are faced with institutional exclusion and personal discrimination in cities, which can be detrimental to their health and well-being. Past studies have repeatedly called for policy reforms that allow migrants to legitimately settle down in cities and eliminate discriminatory practices against migrants (Chen, 2011; Li et al., 2006; Wen & Wang, 2009). Our findings support these recommendations that address the root causes of migrants' hardship. In particular, we find that the perception of discrimination is a very significant predictor of poor mental health, which highlights the importance of reducing institutional and personal discrimination. In addition, the significance

of trans-local ties in our study suggests that facilitating the maintenance of close bonds with the migrants' home communities, while it may not address the root causes of migrants' hardship, may nevertheless be a productive way to foster migrants' well-being, given the context of contemporary urban settings in China. For example, future interventions may examine whether practical measures to strengthen migrants' connection with their home communities, such as subsidizing long-distance communication, would help promote their mental health.

This study only provides a snapshot of rural-to-urban migrants in one large Chinese city. The extent to which its findings can be generalized needs further investigation. Comparable data will need to be collected among migrant populations in major destinations of rural-to-urban migration in China. Moreover, future data collection effects ought to systematically collect information on migrants' socioeconomic profile, their perception of social status, the antecedents and consequences of that perception, and the strength and content of migrants' trans-local and local ties. This study constitutes a first step toward understanding the differential health effects of migrants' trans-local and local social networks. Our findings suggest that future studies ought to examine the determinants of the configuration of migrants' trans-local and local ties, which may help illuminate which migrants are more at risk for poor mental health.

Large-scale internal migration has been taking place in China for almost three decades, and recent years have started to witness the emergence of generational differences within the migrant population. The new generation of migrant workers is better educated and less impoverished. At the same time, the vast interior regions of China, which have been the source for the majority of migrant workers, have started to experience economic growth. Internal migration in China will continue and probably accelerate, but the migration dynamics, such as the relationships among migrants and their sending and receiving communities, will very likely change over time. Future studies are needed to document these changes and examine their consequences.

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